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REMARKSSTATUS OF THE APPLICATION

The instant application was filed on January 11, 2002. In response to previous Office Actions, Applicants have canceled claims 1-24 and added new claims 25-40. In response to the most recent Office Action, Applicants have canceled claims 28-30 and 36-38. In view of the amendments to the claims and the discussion presented below, Applicants submit that the instant application is now in condition for allowance. An early notification of such allowance is therefore earnestly solicited.

THE OFFICE ACTION

The Office has objected to the drawings under 37 C.F.R. 1.83(a) stating that the drawings must show every feature specified in the claims. The Office has rejected claims 28-30 and 36-38 under 35 U.S.C. 112, first and second paragraphs stating that the features of these claims are both non-enabled by the specification and indefinite because they lack essential structural cooperative relationships between the elements of the claims. The Office has further rejected 25, 31, 33 and 39 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,502,530 ('530) to Turlot, et al. The Office has also rejected claims 26-30 and 34-38 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,502,530 ('530) to Turlot, et al. in view of U.S. Patent No. 4,590,042 ('042) to Drage. Finally the Office has rejected claims 32 and 40 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,502,530 ('530) to Turlot, et al. and U.S. Patent No. 4,590,042 ('042) to Drage in view of U.S. Patent No. 6,786,175 ('175) to Dhindsa.

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DISCUSSIONTHE OBJECTION TO THE DRAWINGS UNDER 37 C.F.R. 1.83(a)

The Office has objected to the drawings under 37 C.F.R. 1.83(a) stating that the drawings must show every feature specified in the claims. The features which were not included in the drawings have been removed from the claims, therefore this objection is now moot.

THE REJECTION UNDER 35 U.S.C. 112, FIRST AND SECOND PARAGRAPHS

The Office has rejected claims 28-30 and 36-38 under 35 U.S.C. 112, first and second paragraphs stating that the features of these claims are both non-enabled by the specification and indefinite because they lack essential structural cooperative relationships between the elements of the claims. Claims 28-30 and 36-38 have been canceled, thus the 35 U.S.C. 112 rejections are now moot.

THE REJECTION UNDER 35 U.S.C. 102(b)

The Office has further rejected 25, 31, 33 and 39 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,502,530 ('530) to Turlot, et al.

First and foremost the '530 reference cannot be used as a 35 U.S.C. 102(b) reference. The '530 reference was first published on January 7, 2003. The present application was filed on January 11, 2002. Thus instead of '530 reference being published "more than a year before" the date of the present application, the '530 reference was not published until almost one year after the present application was filed.

Turning now to the reasons for rejection over the '530 reference, the Office has completely twisted and mischaracterized the teachings of the '530 reference in an attempt to meet the claim limitations of the present invention. For example, the Office has said that the '530 reference teaches a monolithic body for the gas distribution cathode. The Office suggests that the gas distribution cathode of the '530 reference is only reference number 31 of figure 2 of the '530 reference. This is completely inaccurate. The plasma chamber of figure 2 of the '530 reference is reference number 36 and the gas distribution cathode of the '530 reference actually minimally includes components 31, 60 and 40. This is clearly not a monolithic body. The Office then goes on to opine that the '530 reference teaches two opposed planar exterior surfaces and says that the horizontal portions of reference numerals 50, 54, 56 and 58 teach this limitation. Applicants cannot understand how the Office can even remotely say that horizontal portions of reference numerals 50, 54, 56 and 58 teach this limitation. The horizontal portions (or any other portion) of reference numerals 50, 54, 56 and 58 are not exterior, nor are they planar. Reference numerals 50, 54, 56 and 58 describe interior cylindrical surfaces of the gas distribution manifold of component number 31 of the non-monolithic gas distribution cathode of the '530 reference. The Office further goes on to say that the cathode includes a gas distribution network which includes reference numerals 50, 52, 54, 56 and 58. Applicants cannot comprehend how reference numerals 50, 54, 56 and 58 can be both an exterior planar surface and an interior gas distribution network.

The Office further says that the primary and secondary gas distribution networks are represented by reference numerals 52 (primary) and 50, 54 56 and 58 (secondary). The

Office also says that the primary distribution network represented by reference numeral 52 begins at the edge of the monolithic gas distribution cathode and extends parallel to the exterior planar surfaces. Applicants contend that the primary distribution channel 52 of the '530 reference begins at the planar exterior surface of component 31 and extends perpendicularly into the interior of component 31 then turns parallel to the surface thereafter when it branches into 4 secondary distribution channels (see Figure 3 of the '530 reference). Applicants further contend that the secondary distribution network does not run parallel to the exterior surfaces "to near the edge", but once again turns perpendicular to the planar exterior surfaces and further splits into tertiary and quaternary (or higher order) gas distribution channels each time running both parallel to and perpendicular to the exterior surfaces and never coming close to the edge until the quaternary or greater stage gas distribution network.

The Office then goes on to say that the internal gas distribution network (reference numbers 50, 52, 54, 56 and 58) of the '530 reference is not only both the exterior surfaces and the gas distribution network of the monolithic cathode as discussed above, but is also the gas outlet ports within the exterior surfaces of the monolithic cathode of the '530 reference. The logic of this argument has, at this point, become absurd. It should first be noted that the actual gas outlets of the '530 reference are indicated by reference numeral 44 and are positioned in plate 40. The gas released from reference numeral 50 of the '530 reference actually enters another portion of the non-monolithic gas distribution cathode, specifically the gas pressure equalization chambers 46a, 46b and 46c. It is clear that the

gas outlet ports of the '530 reference only exist on one exterior planar surface (38) of the cathode of the '530 reference.

Thus, it is clear that the actual teachings of the '530 reference have been ignored and that the Office has mischaracterized the features of the cathode of the '530 reference in order to reject the present claims. The present invention is clearly and patentably different than the cathode taught by the '530 reference. Applicants request the withdrawal of the 35 U.S.C. 102 rejection and allowance of the remaining claims.

THE REJECTIONS UNDER 35 U.S.C. 103(a)

The Office has also rejected claims 26-30 and 34-38 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,502,530 ('530) to Turlot, et al. in view of U.S. Patent No. 4,590,042 ('042) to Drage. Finally the Office has rejected claims 32 and 40 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,502,530 ('530) to Turlot, et al. and U.S. Patent No. 4,590,042 ('042) to Drage in view of U.S. Patent No. 6,786,175 ('175) to Dhindsa.

As previously stated, the primary '530 reference does not teach the instant invention as embodied in independent claims 25 and 33. Further, the additional references '420 and '175 do not rectify the lack of teaching in the primary reference. Therefore, the rejections under 35 U.S.C. 103(a) are not tenable and Applicants respectfully request the withdrawal thereof.

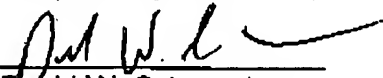
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CONCLUSION

Claims 28-30 and 36-38 have been canceled. Claims 25-27, 31-35 and 39-40 remain at issue. In view of the amendments and the discussion above, applicant submits that the present application is now in condition for allowance and earnestly request the re-examination and timely notice of allowance thereof.

Should the Examiner have any comments or suggestions which would place the instant application in better condition for allowance, he is earnestly requested to contact the undersigned.

Respectfully submitted,


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